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PAT-NO: JP02000331690A

DOCUMENT-IDENTIFIER: JP 2000331690 A

TITLE: MANUFACTURE OF SEPARATOR FOR FUEL CELL

PUBN-DATE: November 30, 2000

INVENTOR-INFORMATION:

NAME	COUNTRY
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NAME	COUNTRY
TOKAI CARBON CO LTD	N/A

APPL-NO: JP11142735

APPL-DATE: May 24, 1999

INT-CL (IPC): H01M008/02

ABSTRACT:

PROBLEM TO BE SOLVED: To realize a manufacturing method of a separator for a fuel cell by injection molding of high productivity.

SOLUTION: This manufacturing method comprises heating and hardening of a compact by crushing and sieving mixture mixed 100 pts.wt. graphite powder of an average particle size of 50  $\mu\text{m}$  or less with a maximum particle size of 250  $\mu\text{m}$  or less and 15-30 pts.wt. phenol resin of number average molecular weight of 100-400 to prepare sized particles of a particle size of 0.1-5 mm followed by injection molding into a metallic mold heated at 100-200 $^{\circ}\text{C}$  with adjusting the sized particles at 30-180 $^{\circ}\text{C}$ . This manufacturing method also comprises heating and hardening of a compact by granulating by a granulating machine and sieving the mixture mixed 100 pts.wt. graphite powder of an average particle size of 50  $\mu\text{m}$  or less with a maximum particle size of 250  $\mu\text{m}$  or less and 15-30 pts.wt. phenol resin of number average molecular weight of 100-400 to prepare sized particles of a particle size of 0.1-5 mm followed by injection molding into a metallic mold heated at 100-200 $^{\circ}\text{C}$  with adjusting the sized particles at 30-180 $^{\circ}\text{C}$ .

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$$\frac{15}{115} = 13\%$$
$$\frac{30}{130} = 23\%$$

C1 4

C1 3

DERWENT-ACC-NO: 2001-151793

DERWENT-WEEK: 200116

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TITLE: Separator manufacturing method for solid polymeric type  
fuel battery, involves adjusting particle size of mixture  
of graphite powder and phenol resin and carrying out  
injection molding at specific temperature

PATENT-ASSIGNEE: TOKAI CARBON KK[TOJW]

PRIORITY-DATA: 1999JP-0142735 (May 24, 1999)

PATENT-FAMILY:

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JP 2000331690 A	November 30, 2000	N/A	006	H01M 008/02

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
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ABSTRACTED-PUB-NO: JP2000331690A

BASIC-ABSTRACT:

NOVELTY - 100 weight parts (wt.pts) of graphite powder with average and maximum particle diameter of 50 mm or less and 250 microns or less is mixed with 15-30 wt.pts of phenol resin of number average molecular weight 100-400. The particle size of mixture is adjusted to 0.1-5 mm at 30-180 deg. C after which injection molding to metallic mold is carried out at 100-200 deg. C to perform heating hardening of the mold.

USE - For manufacturing separator for solid polymeric type fuel battery.

ADVANTAGE - Since amount of mixing resin is few, electroconductivity property is not impaired. The fluidity is maintained by adjusting particle size of mixture.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: SEPARATE MANUFACTURE METHOD SOLID POLYMERISE TYPE FUEL  
BATTERY

ADJUST PARTICLE SIZE MIXTURE GRAPHITE POWDER PHENOL RESIN CARRY  
INJECTION SPECIFIC TEMPERATURE

DERWENT-CLASS: A21 A85 L03 X16

CPI-CODES: A99-A; L03-E01A;

EPI-CODES: X16-C01C; X16-C16;

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